

Daily Analysis Runlog For Sequence/QC Batch ID # LB89308

Review By		Review On				
SubDirectory		LB89308		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP57020,WP57021,WP57022,WP57023,WP57024,WP57025,WP57026,WP57027				
ICV Standard		W1541				
CCV Standard		WP57029				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP54521				
Chk Standard		WP57028,WP55836,WP55355				

Sr#	SampleID	ClientID	QcType	Date	Comment	Status
1	0.0PPBCN	0.0PPBCN	CAL1	08/07/17 12:17		OK
2	5.0PPBCN	5.0PPBCN	CAL2	08/07/17 12:17		OK
3	10PPBCN	10PPBCN	CAL3	08/07/17 12:17		OK
4	50PPBCN	50PPBCN	CAL4	08/07/17 12:17		OK
5	100PPBCN	100PPBCN	CAL5	08/07/17 12:17		OK
6	250PPBCN	250PPBCN	CAL6	08/07/17 12:17		OK
7	500PPBCN	500PPBCN	CAL7	08/07/17 12:17		OK
8	ICV1	ICV1	ICV	08/07/17 12:58		OK
9	ICB1	ICB1	ICB	08/07/17 12:58		OK
10	CCV1	CCV1	CCV	08/07/17 12:58		OK
11	CCB1	CCB1	CCB	08/07/17 12:58		OK
12	PB101284BL	PB101284BL	MB	08/07/17 12:58		OK
13	PB101284BS	PB101284BS	LCS	08/07/17 12:58		OK
14	LOWPB101284	LOWPB101284	SAM	08/07/17 12:58		OK
15	HIGHPB101284	HIGHPB101284	SAM	08/07/17 12:58		OK
16	I4608-01	CLEAN-SAND-3	SAM	08/07/17 12:58		OK
17	I4608-01DUP	CLEAN-SAND-3DUP	DUP	08/07/17 12:58		OK
18	I4608-01MS	CLEAN-SAND-3MS	MS	08/07/17 12:58		OK
19	I4608-01MSD	CLEAN-SAND-3MSD	MSD	08/07/17 13:05		OK
20	I4608-02	CLEAN-SAND-4	SAM	08/07/17 13:05		OK
21	I4608-03	CLEAN-SAND-5	SAM	08/07/17 13:05		OK

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SubDirectory		LB89308		Test : Cyanide		
STD. NAME		STD REF.#				
ICAL Standard		WP57020,WP57021,WP57022,WP57023,WP57024,WP57025,WP57026,WP57027				
ICV Standard		W1541				
CCV Standard		WP57029				
ICSA Standard		N/A				
CRI Standard		N/A				
LCS Standard		WP54521				
Chk Standard		WP57028,WP55836,WP55355				
22	CCV2	CCV2	CCV	08/07/17 13:05		OK
23	CCB2	CCB2	CCB	08/07/17 13:05		OK
24	I4610-01	PL-02-080317-A	SAM	08/07/17 13:05		OK
25	I4610-04	PL-02-080317-B	SAM	08/07/17 13:05		OK
26	I4610-07	PL-02-080317-C	SAM	08/07/17 13:05		OK
27	I4610-10	PL-02-080317-D	SAM	08/07/17 13:05		OK
28	I4610-13	PL-02-080317-E	SAM	08/07/17 13:05		OK
29	I4611-01	EO-01-080317-A	SAM	08/07/17 13:05		OK
30	I4611-04	EO-01-080317-B	SAM	08/07/17 13:11		OK
31	I4611-07	EO-01-080317-C	SAM	08/07/17 13:11		OK
32	I4613-01	TR-05-080317	SAM	08/07/17 13:11		OK
33	CCV3	CCV3	CCV	08/07/17 13:11		OK
34	CCB3	CCB3	CCB	08/07/17 13:11		OK



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Report of Analysis

Client:		Date Collected:	
Project:	LB89308	Date Received:	
Client Sample ID:	HIGHPB101284	SDG No.:	LB89308
Lab Sample ID:	HIGHPB101284	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.49		1	0.003		0.005	mg/L		08/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	8/3/2017 12:00:00 AM
Project:	LB89308	Date Received:	8/3/2017 12:00:00 AM
Client Sample ID:	CLEAN-SAND-3	SDG No.:	LB89308
Lab Sample ID:	I4608-01	Matrix:	Solid
Level (low/med):	low	% Solid:	93.9

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.024	U	1	0.034		0.26	mg/Kg	08/04/2017	08/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	8/3/2017 12:00:00 AM
Project:	LB89308	Date Received:	8/3/2017 12:00:00 AM
Client Sample ID:	CLEAN-SAND-4	SDG No.:	LB89308
Lab Sample ID:	I4608-02	Matrix:	Solid
Level (low/med):	low	% Solid:	93.4

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.022	U	1	0.034		0.26	mg/Kg	08/04/2017	08/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	8/3/2017 12:00:00 AM
Project:	LB89308	Date Received:	8/3/2017 12:00:00 AM
Client Sample ID:	CLEAN-SAND-5	SDG No.:	LB89308
Lab Sample ID:	I4608-03	Matrix:	Solid
Level (low/med):	low	% Solid:	97.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.00011	U	1	0.032		0.24	mg/Kg	08/04/2017	08/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	8/3/2017 12:00:00 AM
Project:	LB89308	Date Received:	8/3/2017 12:00:00 AM
Client Sample ID:	PL-02-080317-A	SDG No.:	LB89308
Lab Sample ID:	I4610-01	Matrix:	Solid
Level (low/med):	low	% Solid:	88.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.0084	U	1	0.036		0.27	mg/Kg	08/04/2017	08/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	8/3/2017 12:00:00 AM
Project:	LB89308	Date Received:	8/3/2017 12:00:00 AM
Client Sample ID:	PL-02-080317-B	SDG No.:	LB89308
Lab Sample ID:	I4610-04	Matrix:	Solid
Level (low/med):	low	% Solid:	86.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.0072	U	1	0.037		0.28	mg/Kg	08/04/2017	08/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	8/3/2017 12:00:00 AM
Project:	LB89308	Date Received:	8/3/2017 12:00:00 AM
Client Sample ID:	PL-02-080317-C	SDG No.:	LB89308
Lab Sample ID:	I4610-07	Matrix:	Solid
Level (low/med):	low	% Solid:	84.5

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.023	U	1	0.038		0.29	mg/Kg	08/04/2017	08/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	8/3/2017 12:00:00 AM
Project:	LB89308	Date Received:	8/3/2017 12:00:00 AM
Client Sample ID:	PL-02-080317-D	SDG No.:	LB89308
Lab Sample ID:	I4610-10	Matrix:	Solid
Level (low/med):	low	% Solid:	82.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.015	U	1	0.039		0.29	mg/Kg	08/04/2017	08/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	8/3/2017 12:00:00 AM
Project:	LB89308	Date Received:	8/3/2017 12:00:00 AM
Client Sample ID:	PL-02-080317-E	SDG No.:	LB89308
Lab Sample ID:	I4610-13	Matrix:	Solid
Level (low/med):	low	% Solid:	90

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.012	U	1	0.036		0.27	mg/Kg	08/04/2017	08/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	8/3/2017 12:00:00 AM
Project:	LB89308	Date Received:	8/3/2017 12:00:00 AM
Client Sample ID:	EO-01-080317-A	SDG No.:	LB89308
Lab Sample ID:	I4611-01	Matrix:	Solid
Level (low/med):	low	% Solid:	86.2

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.024	U	1	0.037		0.28	mg/Kg	08/04/2017	08/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	8/3/2017 12:00:00 AM
Project:	LB89308	Date Received:	8/3/2017 12:00:00 AM
Client Sample ID:	EO-01-080317-B	SDG No.:	LB89308
Lab Sample ID:	I4611-04	Matrix:	Solid
Level (low/med):	low	% Solid:	89.8

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.02	U	1	0.035		0.27	mg/Kg	08/04/2017	08/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	8/3/2017 12:00:00 AM
Project:	LB89308	Date Received:	8/3/2017 12:00:00 AM
Client Sample ID:	EO-01-080317-C	SDG No.:	LB89308
Lab Sample ID:	I4611-07	Matrix:	Solid
Level (low/med):	low	% Solid:	90

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	-0.0031	U	1	0.036		0.27	mg/Kg	08/04/2017	08/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	8/3/2017 12:00:00 AM
Project:	LB89308	Date Received:	8/3/2017 12:00:00 AM
Client Sample ID:	TR-05-080317	SDG No.:	LB89308
Lab Sample ID:	I4613-01	Matrix:	Solid
Level (low/med):	low	% Solid:	93.3

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.021	U	1	0.034		0.26	mg/Kg	08/04/2017	08/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB89308	Date Received:	
Client Sample ID:	LOWPB101284	SDG No.:	LB89308
Lab Sample ID:	LOWPB101284	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
57-12-5	Cyanide	0.0096		1	0.003		0.005	mg/L		08/07/2017	9012B



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Report of Analysis

Client:		Date Collected:	
Project:	LB89308	Date Received:	
Client Sample ID:	LOWPB101284	SDG No.:	LB89308
Lab Sample ID:	LOWPB101284	Matrix:	WATER
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
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Color Before:	Clarity Before:	Texture:
Color After:	Clarity After:	Artifacts:
Comments:		

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N = Spiked sample recovery not within control limits

Sample ID	Analyte	Result	True Value	% Recovery	% RSD	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
		mg/L								
ICV1	Cyanide	0.096	0.099	97	0	85 - 115		08/07/2017	12:58	LB89308



GENCHEM

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: LB89308

SDG No.: LB89308

Contract: _____ Lab Code: CHEM

Case No.: LB89308

SAS No.: LB89308

Initial Calibration Source: _____

Continuing Calibration Source: _____

Sample ID	Analyte	Result mg/L	True Value	% Recovery	% RSD	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV1	Cyanide	0.24	0.25	96	0	90 - 110		08/07/2017	12:58	LB89308
CCV2	Cyanide	0.24	0.25	96	0	90 - 110		08/07/2017	13:05	LB89308
CCV3	Cyanide	0.25	0.25	100	0	90 - 110		08/07/2017	13:11	LB89308



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: LB89308 **SDG No.:** LB89308
Contract: **Lab Code:** CHEM **Case No.:** LB89308 **SAS No.:** LB89308

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB1	Cyanide	-0.00013	+/-0.005	U		0.005		08/07/2017	12:58	LB89308

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB1	Cyanide	-0.00013	+/-0.005	U		0.005		08/07/2017	12:58	LB89308
CCB2	Cyanide	-0	+/-0.005	U		0.005		08/07/2017	13:05	LB89308
CCB3	Cyanide	-0.00017	+/-0.005	U		0.005		08/07/2017	13:11	LB89308



GENCHEM

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client:

LB89308

SDG No.:

LB89308

Contract:

Lab Code:

CHEM

Case No.:

LB89308

SAS No.:

LB89308

Sample ID	Analyte	Result mg/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
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GENCHEM
- 3b -
PREPARATION BLANK SUMMARY

Client: LB89308

SDG No.: LB89308

Instrument: Konelab 20

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	LOD mg/Kg	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB101284BL	Cyanide	SOLID -0.015	<0.25	Batch Number: U		PB101284 0.25		Prep Date: 08/07/2017	08/04/2017 12:58	LB89308



GENCHEM
- 5a -
MATRIX SPIKE SUMMARY

client: LB89308 level: low sdg no.: LB89308
contract: lab code: CHEM case no.: LB89308 sas no.: LB89308
matrix: Solid sample id: I4608-01 client id: CLEAN-SAND-3MS
Percent Solids for Sample: 93.9 Spiked ID: I4608-01MS Percent Solids for Spike Sample: 93.9

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.9		0.034	U	2.1	90.5		



GENCHEM
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: LB89308 level: low sdg no.: LB89308
contract: lab code: CHEM case no.: LB89308 sas no.: LB89308
matrix: Solid sample id: I4608-01 client id: CLEAN-SAND-3MSD
Percent Solids for Sample: 93.9 Spiked ID: I4608-01MSD Percent Solids for Spike Sample: 93.9

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cyanide	mg/Kg	75 - 125	1.9		0.034	U	2.1	90.5		

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB89308 **Level:** LOW **SDG No.:** LB89308
Contract: **Lab Code:** CHEM **Case No.:** LB89308 **SAS No.:** LB89308
Matrix: Solid **Sample ID:** I4608-01 **Client ID:** CLEAN-SAND-3DUP
Percent Solids for Sample: 93.9 **Duplicate ID** I4608-01DUP **Percent Solids for Spike Sample:** 93.9

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	0.034	U	-0.014	U			

GENCHEM

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: LB89308 **Level:** LOW **SDG No.:** LB89308
Contract: **Lab Code:** CHEM **Case No.:** LB89308 **SAS No.:** LB89308
Matrix: Solid **Sample ID:** I4608-01MS **Client ID:** CLEAN-SAND-3MSD
Percent Solids for Sample: 93.9 **Duplicate ID** I4608-01MSD **Percent Solids for Spike Sample:** 93.9

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cyanide	mg/Kg	20	1.9		1.9		0		



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- 7 -

LABORATORY CONTROL SAMPLE SUMMARY

Client: LB89308

SDG No.: LB89308

Contract:

Lab Code: CHEM

Case No.: LB89308

SAS No.: LB89308

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB101284BS Cyanide	mg/Kg	4.9	4.7		95.9	85 - 115	